



Illinois Department of Transportation

Memorandum

To: DIRECTORS, DEPUTY DIRECTORS, AND BUREAU CHIEFS
From: Dianna L. Taylor
Bureau Chief of Personnel Management
Subject: Technical Vacancy
Date: May 16, 2016

Attached are the Position Summary Sheet and Position Description for the vacant technical position listed below. Please post this vacancy announcement May 17, 2016 in the designated areas.

The deadline for applicants to submit their names for consideration is **4:30 p.m.** on **Tuesday, May 31, 2016**. Applicants will not be accepted after that time and date.

NOTE: Applications will be accepted from qualified permanent DOT employees only. A copy of each applicant's ACTIVE Illinois Professional Engineer License must accompany application for this position. Please be advised that if a high volume of applications are received, the applications may be screened to establish a smaller pool of applicants for interview. The screening will be based on the information contained in the application.

All applicants will receive a position description for the position they are applying for. If you have any questions, please contact Jennifer Sunderland or Denise Hamilton at 217/782-5594.

CE IV Traffic Design Engineer
Region 1/District 1/Traffic
Highways
Schaumburg

Attachments
40870

Technical Applications (PM 1080) **must be received** by the Bureau of Personnel Management, Room 113, 2300 South Dirksen Parkway, Springfield, IL 62764 (Fax# 217/557-3134) or emailed to DOT.CO.BPM.EmploymentApplications@illinois.gov by **Tuesday, May 31, 2016**, 4:30 p.m. Please include address, daytime phone and position for which applying if not already listed on application. Applicants will be notified in writing to schedule interviews.

NOTE: Applications will be accepted from qualified permanent DOT employees only. A copy of each applicant's ACTIVE Illinois Professional Engineer License must accompany application for this position. Please be advised that if a high volume of applications are received, the applications may be screened to establish a smaller pool of applicants for interview. The screening will be based on the information contained in the application.



Illinois Department of Transportation

An Equal Opportunity Employer

Position Summary Sheet

Classification: Civil Engineer IV

Salary Range: \$5,800 - \$9,230

Position Title: Traffic Design Engineer

Union Position: ☒ Yes ☐ No

Position Number: PW114-23-51-901-20-01

IPR#: 40870

Office/Central Bureau/District/Work Address:

Highways/Region One/District One/Bureau of Traffic/201 W Center Court, Schaumburg, IL

Description Of Duties:

This position is accountable for directing and coordinating all activities related to the design and plan preparation of traffic control devices including signing, pavement marking, traffic signals, railroad interconnects, flashers, CMAQ and HSIP programs through the application of appropriate engineering principles to improve the safety and capacity of the State highway system.

Special Qualifications:

The following criteria is required:

- A current Illinois Professional Engineer license
- Valid driver's license.
- Travel is required to conduct site visits
- Ability to traverse uneven terrain

The following criteria is desired:

- Six years' experience in civil engineering including four years of supervisory responsibility of which three years should be in traffic or highway engineering
- Six years of experience in preparing plans and specifications
- Ability to manage a technical staff
- Strong oral and written communication skills

Shift/Remarks:

8:00 am - 4:15 pm / Monday – Friday (45 minute lunch)

***This position is covered under the Revolving Door Prohibition (RDP) Policy.**

ILLINOIS DEPARTMENT OF TRANSPORTATION

POSITION DESCRIPTION

DATE:	February, 2016	POSITION:	Traffic Design Engineer
APPROVED BY:	Lisa E. Heaven-Baum	OFFICE/DIVISION:	Highways/D1/Schaumburg/Bureau of Traffic Operations
CODE:	PW114-23-51-901-20-01	REPORTS TO:	Traffic Programs Engineer

Position Purpose

This position is accountable for directing and coordinating all activities related to the design and plan preparation of traffic control devices including signing, pavement marking, traffic signals, railroad interconnects, flashers, CMAQ and HSIP programs through the application of appropriate engineering principles to improve the safety and capacity of the State highway system.

Dimensions

Subordinate Personnel	7 Direct, 3 Indirect
Annual CMAQ & HSIP Traffic Improvement Contracts	\$6,500,000
Annual Safety Improvement Contracts	\$1,000,000
Annual Traffic Signal Improvement Contracts	\$5,000,000
Highway or Freeway Signing Improvement Contracts	\$1,000,000
Annual Traffic Signal Improvements/Roadway Projects	\$10,000,000
Annual Consulting Engineer Firm Contracts	\$2,000,000
Annual Traffic Plan Reviews and Approvals	750

Nature and Scope

This position reports to the Traffic Programs Engineer as do the Traffic Signal Engineer, the Traffic Studies Engineer and an Office Coordinator. Reporting to this position are five (5) Traffic Design Squad Engineers, two (2) Traffic Signal Plan Review Technicians and three (3) Traffic Signal Squad Technicians.

The physical characteristics of the District involving as they do urban, suburban and rural features constitute an unusual challenge to the effective design of traffic control devices. Because the District is highly urbanized, its highway system is interlocked with a complicated network of tollway and local government highways and streets. With this urbanization there has developed a condition where forty-seven billion vehicle miles are traveled annually on the District's highway system. This constitutes a constant potential for traffic disruption and endangers traffic safety. The declining availability of right-of-way increases the importance of the operational aspects of traffic control and poses unusual problems in the design of effective traffic control devices that improve highway safety and capacity. The availability of increasingly sophisticated technology, particularly in the areas of signal system control hardware, communications, and the use of computer programs in signal design including MicroStation CADD, SignCAD, Syncro, HCM and others increase possible options and complicates the task of application to present and anticipated traffic conditions. Based on constantly changing equipment technology, the incumbent reviews design policies and specifications to provide timely updates for proven and beneficial concepts to be included in future design contracts. This position coordinates the activities of three designs quads and several outside consulting firms in preparing and/or reviewing plans, specifications and estimates for low cost traffic improvements, traffic signal improvements, interstate highway or freeway signing improvements, thermoplastic pavement markings, and raised pavement markings; evaluating various traffic control devices that might be used in specific situations; ascertaining the appropriate traffic engineering design criteria that are applicable to specific projects and resolving questions regarding interpretation and applicability of specifications; coordinating work of subordinates, consultants and CADD personnel so as to meet established

schedules, projecting scope of work so as to ensure the demands of site traffic flow are met; and integrating traffic control plans into general project improvement plans.

Major roadway projects cannot afford to be delayed due to necessary field revisions caused by various problems, such as, unforeseen underground conflicts, additions to the scope of the contract or consultant design errors. The incumbent will work closely with the resident engineer and project manager and, through his/her staff, provide advice and recommend solutions to these problems. The incumbent, through his/her staff, reviews all proposed traffic control equipment submittals/catalog cuts for construction projects on District One roadways. Any discrepancies in equipment to be supplied must be settled in a timely manner. The greatest challenge to this position is to provide for the appropriate application of the principles of traffic engineering, and an increasingly sophisticated communications and computer technology to the design of traffic control improvement projects.

The incumbent personally plans and schedules work; provides technical direction to subordinate staff on unusual problems of design and preparation of contract documents, and designs more complex projects using the CADD system; implements and establishes policy and procedures for the standardization of design; provides a central record and filing system for the storage, preservation and recording of all contract documents; assigns work to the State's traffic signal design consultants and monitors progress; reviews corridor, location and geometric design studies; provides preliminary cost estimates for projects under consideration for inclusion in future programs; and establishes the target letting dates for all assigned projects based upon an analysis of manpower and workload. The incumbent for this position must have good communicative skills to deal with consulting firms, contracting engineers, municipal engineers and the general public. Numerous site meetings, inspections and observations are required which mandates the ability to drive a State vehicle and walk various field conditions in order to perform these functions.

The incumbent accomplishes these accountabilities through the following staff:

Traffic Design Squad Engineers (5): who are responsible for assignments in the preparation and design of contract documents for low cost traffic improvements, traffic signal improvements, traffic signal systems and highway or freeway signing improvements including pavement marking projects.

Traffic Plan Review Technicians (2): who are responsible for reviewing all permit and traffic signal contract plans, specifications and cost estimates.

Traffic Signal Squad Technicians (3): who work with the Traffic Design Squad Engineers in the preparation and design of contract documents.

The incumbent applies principles of traffic engineering and establishes project costs in accordance with established policies, but sound judgment and independent decisions must be exercised in the preparation of contract documents and the design for all types of traffic improvements. The incumbent is expected to develop revisions in project scope or cost where required by operating needs of the project site.

Within the Department, the incumbent is required to establish and maintain contact with the Engineer of Bridge and Traffic Structures in the Central Bureau of Design & Environment concerning technical aspects of the design in Interstate highway or freeway signing structures, and the District Bureaus of Design and Construction on proper contract preparation procedures. Contacts outside the Department include the Illinois Commerce Commission concerning railroad warning devices adjacent to traffic signals, Commonwealth Edison Company concerning power service to traffic signals, traffic signal and signing consultants, and the Federal Highway Administration in describing project limits and requirements and in obtaining project approval.

The effectiveness of this position is measured by the prompt and accurate preparation and/or review of contract documents of meet target letting dates with minimum engineering costs.

Principal Accountabilities

1. Ensures all signal and traffic plans on District One roadways are accurately designed in accordance with appropriate design principles and equipment specifications.
2. Ensures that all Bureau of Traffic Operation designs are completed in time to meet established letting dates.
3. Ensures all consultant, county, local and private contracts are reviewed on time to meet established lettings.
4. Ensures systematic reviews of design policies and new products and incorporates proven and beneficial concepts into future designs.
5. Ensures all traffic signal material and equipment is approved for all construction projects involving District One roadways in a timely fashion.
6. Ensures technical advice to communities and consultants concerning signal design and operation.
7. Performs duties in compliance with departmental safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.